

## Group.02

### 0 Algorithm & Artificial Intelligence



Big data Accumulation



Data Center



Social Enviromental & Energy Issues

### 4 Effects



Environment

CO2  
Mineral



Resources

Sand  
Water  
Electricity



Economy

Squeeze on  
IT budgets  
Rising Global  
Energy Prices

## Data Center Energy Comsuming

### 1 Why Data Center is Increasing

1.1

Human Factors

Human Needs

Short Videos  
Games

YOUTUBE  
TWITTER  
KUAISHOU

Social Apps

WHATS APP  
WECHAT  
FACEBOOK

Photos

INSTGRAM

Online Pay

ALIPAY  
PAYPAL

User Habits

E-mails  
Online Chatting  
Cloud Storage

1.2

Internet Effects

Popularity of Smart Devices

iPad  
iPhone  
Tablet

Popularity of Mobile NetWorks

4G 5G etc.  
Wi-Fi

### 2 Data Center Energy Management

2.1

Data Center Location

Apples Cloud Computing Center

Guizhou, China

Google Data Center

America, Europe, China  
etc.

Alibaba Cloud

Hangzhou, ZheJiang,  
China etc.

2.2

Equipment Utilization

3.1

Data Center Own Scale

Data Center Land Area

3.2

Energy  
Consumption Type

Rare Mineral  
Electricity  
Water  
Coal  
Natural Gas  
Oil  
Wind  
etc.

3.3

Equipment Energy  
Consumption

Storage  
Computing  
Fire Protection  
Cooling System (Air Condition Units)  
Information Security

### 3 Data Center Energy Consumption